

### **REMARKS**

The Applicant thanks the Examiner for the detailed comments in the Office Action. The Office Action has been carefully considered. It is respectfully submitted that the issues raised are traversed, being hereinafter addressed with reference to the relevant headings appearing in the detailed action section of the Office Action.

#### ***Claim Rejections – 35 USC § 101***

The Examiner has rejected claims 1 – 28 as being directed toward non-statutory subject matter. The Applicant does not agree with the Examiner's conclusion. For example, performing step (a) to (d) of previous claim 1 resulted in the determination of a number of layouts which are a concrete, useful and tangible result, and hence claim 1 is statutory subject matter.

However, in order to expedite the allowance of the current application, the Applicant has amended the independent claims to specify displaying the selected resulting layout, thereby providing an output in the form of a displayed layout. This step of displaying the selected resulting layout produces a concrete, useful and tangible result.

Therefore, the Application requests withdrawal of the §101 rejection.

#### ***Claim Rejections – 35 USC § 112***

The Examiner has rejected claims 1 and 11, as claims 1 and 11 contain subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed had possession of the claim invention.

In particular, the Examiner argues that the specification fails to support the arranging geometrically and “*according to the priorities*” the alphanumeric and/or graphical elements. The Applicant does not agree with the Examiner's conclusion.

In order to expedite the allowance of the current application, the Applicant has clarified claims 1 and 11 to specify at least some of the rules being associated with a priority representing an arrangement requirement of the particular element, wherein the score of the resulting layout is weighted according to the priority associated with the at least some of the rules.

Support for this clarifying amendment can be found at paragraph 115 where it states “*a priority for each rule that may be applied to the positional requirement of an element*”. Paragraph 115 also provides further support where the specification discusses how particular rules have associated numeric quantities which weight the score of the resulting layout. Further support can be found at paragraph 70, where the specification states “*The interrelations are*

*defined in terms of rules, which are supplemented with one or more weightings which provide a relative measure of the importance of each rule to the intended layout”.*

Based on these reasons, the Applicant respectfully submits that amended claims 1 and 11 are supported by the description. The Applicant respectfully requests withdrawal of the §112 rejection.

#### ***Claim Rejections – 35 USC § 103***

The Examiner has rejected claims 1 to 6, 8, 9, 11-17 and 22-28 as being unpatentable over Fukui et al (Patent No. 5517621) in view of Simon et al (Publication No. US2002/0040375).

The Applicant requests reconsideration and withdrawal of the claim rejection in light of the following comments.

The Examiner has stated that on page 32 of the Office Action that:

*“The Examiner uses the broadest reasonable interpretation to conclude the predetermined criteria as taught by Simon et al could be a set or prioritized rules regarding arranging...the alphanumeric and/or graphical elements to obtain a resulting layout”.*

The Applicant submits that Simon et al. fails to teach that the score of the layouts is weighted according to the priority associated with least some of the rules, as specified in both claims 1 and 11.

Simon et al. discloses that the score is determined according to predetermined criteria. Simon et al provides two examples of predetermined criteria: white space between images and aesthetic balance. Each of these predetermined criteria can be used to calculate a value which can be used in a cost function to calculate a score for the page layout.

However, there is no teaching or suggestion in Simon et al as to how two values are to be used in the cost function. The Applicant submits that a person skilled in the art would logically interpret that the predetermined criteria values are likely to be summed together but not that this represents any form of priority.

At best, Fukui et al in view of Simon et al therefore teaches the person skilled in the art to sum together the predetermined criteria values to determine the score for the page layout.

Thus, Fukui et al in view of Simon et al fails to disclose that the score of the resulting layout is weighted according to the priority associated with at least some of the rules, as required by claims 1 and 11. This is clearly not obvious as there is absolutely no teaching or suggestion that one predetermined criteria value of Simon et al should be valued more heavily than another predetermined criteria value, or that any form of priority should be used.

We also note that the Examiner has stated on page 11 of the Office Action that under the broadest interpretation the "*predetermined page format*" was developed based on specific priorities as how the elements are to be arranged. This appears to contradict the statement on page 32 that the "predetermined criteria" could be prioritised rules, and the Applicant would appreciate if the Examiner could clarify what he believes is the priority in Simon et al.

In any event, we respectfully submit that even under the broadest interpretation of predetermined page criteria Simon et al fails to disclose at least some of the rules being associated with a priority, wherein the priority is used to weight the score, as specified in claims 1 and 11.

Thus if the Examiner interprets the predetermined criteria to be the priority, we respectfully submit that there is no suggestion in Simon et al that one predetermined criteria, such as the white space criteria, could have a priority which weights the score more heavily than another predetermined criteria, such as the aesthetic balance criteria.

If, on the other hand, the Examiner interprets the predetermined page format to be the priority, we respectfully submit that the predetermined page format is not used to weight the score.

MPEP 2143 states:

*"To establish a prima facie case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. **Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations.**"*

*The teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art, not in applicant's disclosure. In re Vaec, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991)."*  
(emphasis added)

As the Applicant has previously stated, Fukui et al. in view of Simon et al fails to disclose at least some of the rules being associated with a priority representing a positional requirement of the one or more particular elements, wherein the method includes the step of scoring the resulting layout according to the one or more rules, and wherein the score of the resulting layout is weighted according to the priority associated with the at least some of the rules.

Therefore, the Applicant respectfully submits that Fukui et al. in view of Simon et al fails to satisfy the third basic criteria of a *prima facie* case of obviousness as required under MPEP 2143.

Reconsideration and withdrawal of the claim rejection for claims 1 and 11, and all dependent claims is respectfully requested.

In regard to independent claims 23 and 26, the Examiner has stated on page 32:

*“Simon et al teaches the system can automatically iterate through the page layout subroutine generating a predetermined number of image page layouts (0069).”*

The Applicant respectfully submits that this overlooks the important requirement of claims 23 and 26 which state that *“the first set of rules also defining a predetermined number of resulting layouts for a given number of elements”*. This indicates that the number of resulting layouts is dependent upon the number of elements that are being arranged within the defined space.

Simon et al teaches using a simulated annealing approach which clearly has no dependency on the number of elements being arranged within the defined space. Although a limit on the number of iterations can be used in the system of Simon et al, there is no disclosure that this limit is for a given number of elements.

Thus, Fukui et al. in view of Simon et al fails to disclose that feature of the first set of rules also defining a predetermined number of resulting layouts for a given number of elements. As such, the third basic criteria to establish a *prima facie* case of obviousness has not been satisfied by the Examiner, as required under MPEP 2143, as Fukui et al. in view of Simon et al fails to teach or suggest all claim features.

The Applicant has also introduced new dependent claims 29 to 34 to define further novel and inventive features which are not shown by Fukui et al. and Simon et al.

In particular, claim 29 specifies that one of the rules is a positional rule that defines a desired distance between at least one of: two of the elements; and one of the elements and an edge of the defined space; wherein the method includes scoring the resulting layout according to a conformance of the resulting layout with the desired distance of the positional rule.

Claim 30 has been introduced which specifies the positional rule is one of the at least some of the rules, and wherein the method includes weighting the score of the resulting layout according to the associated priority of the positional rule. Claim 31 has also been introduced which specifies the user defining the desired distance for the positional rule.

Support for the subject matter of claims 29, 30 and 31 can be found at paragraph 115 of the specification which refers to rules defining ‘Max allowable gap’, ‘Max Distance’, and ‘Points deducted per mm’. Further support is provided at paragraph 100 of the specification which refers to the vertical position of line 440.

The Applicant respectfully submits that Fukui et al. and Simon et al fail to disclose a positional rule that defines a desired distance between two of the elements or one of the elements and an edge of the defined space, wherein the resulting layout is scored according to a conformance of the resulting layout with the desired distance of the positional rule, as required by Claim 29. Furthermore, there is no teaching or suggestion by Fukui et al. and Simon et al of weighting the score of the resulting layout according to the associated priority of the positional rule, as required by claim 30. Additionally, there is no disclosure by Fukui et al. and Simon et al of the user defining the desired distance for the positional rule, as required by claim 31.

Claim 32 has been introduced to specify that the elements include a first and second element having a spatial dependency defined therebetween, wherein the method includes arranging the first element within the defined space, causing an automatic arrangement of the second element within the defined space in accordance with the spatial dependency. Support for the subject matter of claim 32 can be found at paragraphs 103, 104 and 105 which refer to spatial dependencies. The Applicant respectfully submits that Fukui et al. and Simon et al fail to disclose, teach or suggest a first and second element having a spatial dependency defined therebetween, wherein the arrangement of the first element within the defined space causes an automatic arrangement of the second element within the defined space in accordance with the spatial dependency.

Claim 33 has been introduced to specify that the method includes the user defining the priority associated with the at least one of the rules. Support for the subject matter of claim 32 can be found at paragraph 115 and Figure 8b which shows the priority for rules being defined by the user interacting with a graphical user interface. The Applicant respectfully submits that by Fukui et al. and Simon et al fail to disclose the user defining a priority of one of the rules, as required by claim 33.

Claim 34 has been introduced to specify the first set of rules including  $n$  rules and wherein there are  $m$  elements to be arranged in the defined space, wherein the predetermined number of resulting layouts is  $n^m$ . Support for the subject matter of claim 33 can be found at paragraph 137 of the specification. The Applicant respectfully submits that by Fukui et al. and Simon et al fail to disclose the predetermined number of resulting layouts being  $n^m$ , as required by claim 34.

Reconsideration and withdrawal of the claim rejections is respectfully requested.

Based on the above amendments and these remarks, reconsideration of claims 1-6, 8-9, 11-17, 22-23 and 25-28 and consideration of claims 29-34 is respectfully requested.

The Examiner's prompt attention to this matter is greatly appreciated. Should further questions remain, the Examiner is invited to contact the undersigned attorney by telephone.

The Commissioner is authorized to charge any underpayment or credit any overpayment to Deposit Account No. 501826 for any matter in connection with this response, including any fee for extension of time, which may be required.

Respectfully submitted,

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